

## CLAIM AMENDMENTS

1-18. (Canceled)

19. (New) An internal combustion engine comprising:

an exhaust gas line in which an NO<sub>x</sub> reduction catalytic converter is arranged, and

a reducing agent-generating unit for generation of H<sub>2</sub>-containing and NH<sub>3</sub>-containing reducing gas which can be added upstream of the NO<sub>x</sub> reduction catalytic converter in the exhaust gas line,

wherein the reducing agent-generating unit can be supplied with at least one of an HC-containing fuel, air, and exhaust gas, and

wherein the reducing agent-generating unit has an NO<sub>x</sub> generation step and an H<sub>2</sub> generation step in serial arrangement.

20. (New) The internal combustion engine according to claim 19, wherein the NO<sub>x</sub> generation step is arranged downstream from the H<sub>2</sub> generation step.

21. (New) The internal combustion engine according to claim 19, wherein the NO<sub>x</sub> generation step is arranged upstream from the H<sub>2</sub> generation step.

22. (New) The internal combustion engine according to claim 19, further comprising an  $\text{NH}_3$  generation step arranged downstream from the  $\text{NO}_x$  generation step.

23. (New) The internal combustion engine according to claim 20, further comprising an  $\text{NH}_3$  generation step arranged downstream from the  $\text{NO}_x$  generation step.

24. (New) The internal combustion engine according to claim 21, further comprising an  $\text{NH}_3$  generation step arranged downstream from the  $\text{NO}_x$  generation step.

25. (New) The internal combustion engine according to claim 19, wherein the reducing agent-generating unit can be operated alternately in first and second operating modes in such a way that, during the first operating mode, an  $\text{NO}_x$ -containing gas can be produced and, during the second operating mode, an  $\text{H}_2$ -containing and  $\text{NH}_3$ -containing reducing gas can be produced.

26. (New) The internal combustion engine according to claim 22, wherein a reducing agent-generating unit can be operated alternately in first and second operating modes in such a way that, in the first operating mode, an  $\text{NO}_x$ -containing gas can be produced and, in the second operating mode, an  $\text{H}_2$ -containing and  $\text{NH}_3$ -containing reducing gas can be produced.

27. (New) The internal combustion engine according to claim 23, wherein a reducing agent-generating unit can be operated alternately in first and second operating modes in such a way that, in the first operating mode, an NO<sub>x</sub>-containing gas can be produced and, in the second operating mode, an H<sub>2</sub>-containing and NH<sub>3</sub>-containing reducing gas can be produced.

28. (New) The internal combustion engine according to claim 24, wherein a reducing agent-generating unit can be operated alternately in first and second operating modes in such a way that in the first operating mode of the NO<sub>x</sub> generation step, an NO<sub>x</sub>-containing gas can be produced and, in the second operating mode, an H<sub>2</sub>-containing and NH<sub>3</sub>-containing reducing gas can be produced.

29. (New) The internal combustion engine according to claim 25, further comprising an NO<sub>x</sub> intermediate storage unit arranged downstream from the NO<sub>x</sub> generation step.

30. (New) The internal combustion engine according to claim 26, further comprising an NO<sub>x</sub> intermediate storage unit arranged downstream from the NO<sub>x</sub> generation step.

31. (New) The internal combustion engine according to claim 27, further comprising an NO<sub>x</sub> intermediate storage unit arranged downstream from the NO<sub>x</sub> generation step.

32. (New) The internal combustion engine according to claim 28, further comprising an NO<sub>x</sub> intermediate storage unit arranged downstream from the NO<sub>x</sub> generation step.

33. (New) The internal combustion engine according to claim 29, wherein the NO<sub>x</sub> intermediate storage unit is designed for reaction of stored NO<sub>x</sub> with H<sub>2</sub> to NH<sub>3</sub>.

34. (New) The internal combustion engine according to claim 30, wherein the NO<sub>x</sub> intermediate storage unit is designed for reaction of stored NO<sub>x</sub> with H<sub>2</sub> to NH<sub>3</sub>.

35. (New) The internal combustion engine according to claim 31, wherein the NO<sub>x</sub> intermediate storage unit is designed for reaction of stored NO<sub>x</sub> with H<sub>2</sub> to NH<sub>3</sub>.

36. (New) The internal combustion engine according to claim 32, wherein the NO<sub>x</sub> intermediate storage unit is designed for reaction of stored NO<sub>x</sub> with H<sub>2</sub> to NH<sub>3</sub>.

37. (New) The internal combustion engine according to claim 21, wherein the  $H_2$  generation step is designed for reaction of supplied  $NO_x$  into  $NH_3$ .

38. (New) The internal combustion engine according to claim 24, wherein the  $H_2$  generation step is designed for reaction of supplied  $NO_x$  into  $NH_3$ .

39. (New) The internal combustion engine according to claim 28, wherein the  $H_2$  generation step is designed for reaction of supplied  $NO_x$  into  $NH_3$ .

40. (New) The internal combustion engine according claim 32, wherein the  $H_2$  generation step is designed for reaction of supplied  $NO_x$  into  $NH_3$ .

41. (New) The internal combustion engine according claim 36, wherein the  $H_2$  generation step is designed for reaction of supplied  $NO_x$  into  $NH_3$ .

42. (New) The internal combustion engine according to claim 19, wherein the engine is a Diesel engine.

43. (New) A process for operation of an internal combustion engine having a reducing agent-generating unit and an exhaust gas line in which an  $NO_x$  reduction catalytic converter is arranged, whereby a reducing gas produced by the reducing agent-generating unit is added upstream of the  $NO_x$  reducing

catalytic converter to the exhaust gas, wherein generation of the reducing gas comprises:

generating an NO<sub>x</sub>-containing gas from an NO<sub>x</sub> generation stage allocated to the reducing agent-generating unit from at least one of air and exhaust gas supplied to the NO<sub>x</sub> generation stage; and

intermediately storing NO<sub>x</sub> when conducting the NO<sub>x</sub>-containing gas produced through an NO<sub>x</sub> intermediate storage unit which is arranged downstream from the NO<sub>x</sub> generation stage and allocated to the reducing agent-generating unit; or

generating an H<sub>2</sub>-containing gas by an H<sub>2</sub> generation stage allocated to the reducing agent-generating unit and arranged upstream from an NO<sub>x</sub> intermediate storage unit from fuel and air or exhaust gas supplied to the H<sub>2</sub> generation stage; and

reacting NO<sub>x</sub> stored in the NO<sub>x</sub> intermediate storage unit with the gas produced into NH<sub>3</sub> so that a reducing gas containing H<sub>2</sub> and NH<sub>3</sub> is produced.

44. (New) The process according to claim 43, wherein reaction of NO<sub>x</sub> into NH<sub>3</sub> takes place in the catalytic NH<sub>3</sub> generation stage, which is allocated to the reducing agent generation unit and arranged downstream from the NO<sub>x</sub> intermediate storage unit.

45. (New) The process according to claim 43, wherein intermediate storage of  $\text{NO}_x$  and reaction of  $\text{NO}_x$  into  $\text{NH}_3$  is performed with a catalytic  $\text{NO}_x$  intermediate storage unit.

46. (New) The process according to claim 43, wherein the  $\text{NO}_x$  reducing catalytic converter is divided into a denox catalytic converter stage for reaction of  $\text{NO}_x$  with  $\text{H}_2$  and an SCR catalytic converter stage for reaction of  $\text{NO}_x$  with  $\text{NH}_3$ , and wherein the reducing gas is supplied to the exhaust gas as a function of its composition at an input side to the SCR catalytic converter stage or on an input side to the denox catalytic converter stage.

47. (New) The process according to claim 44, wherein the  $\text{NO}_x$  reducing catalytic converter is divided into a denox catalytic converter stage for reaction of  $\text{NO}_x$  with  $\text{H}_2$  and an SCR catalytic converter stage for reaction of  $\text{NO}_x$  with  $\text{NH}_3$ , and wherein the reducing gas is supplied to the exhaust gas as a function of its composition at an input side to the SCR catalytic converter stage or on an input side to the denox catalytic converter stage.

48. (New) The process according to claim 45, wherein the  $\text{NO}_x$  reducing catalytic converter is divided into a denox catalytic converter stage for reaction of  $\text{NO}_x$  with  $\text{H}_2$  and an SCR catalytic converter stage for reaction of  $\text{NO}_x$  with  $\text{NH}_3$ , and wherein the reducing gas is supplied to the exhaust gas as a function of its

composition at an input side to the SCR catalytic converter stage or on an input side to the denox catalytic converter stage.

49. (New) A process for operation of an internal combustion engine having a reducing agent-generating unit and an exhaust gas line in which an NO<sub>x</sub> reduction catalytic converter is arranged, whereby a reducing gas produced by the reducing agent-generating unit is added upstream from the NO<sub>x</sub> reducing catalytic converter to the exhaust gas, wherein generation of the reducing gas comprises:

generating an NO<sub>x</sub>-containing gas from an NO<sub>x</sub> generation stage allocated to the reducing agent-generating unit from at least one of air and exhaust gas supplied to the NO<sub>x</sub> generation stage; and

generating an H<sub>2</sub>-containing gas and an NH<sub>3</sub>-containing reducing gas from an H<sub>2</sub> generation stage allocated to the reducing agent-generating unit and arranged downstream from the NO<sub>x</sub> generation stage based on fuel fed to the H<sub>2</sub> generation stage, NO<sub>x</sub>-containing gas produced, fuel supplied, and at least one of air and exhaust gas.

50. (New) The process according to claim 49, wherein the NO<sub>x</sub> reducing catalytic converter is divided into a denox catalytic converter stage for reaction of NO<sub>x</sub> with H<sub>2</sub> and an SCR catalytic converter stage for reaction of NO<sub>x</sub> with NH<sub>3</sub>, and wherein the reducing gas is supplied to the exhaust gas as a function of its



composition at an input side to the SCR catalytic converter stage or on an input side to the denox catalytic converter stage.